

WHAT IS CLAIMED IS:

1. A computer readable medium having stored thereon computer readable instructions, comprising:
  - 5 a managed code layer having a speech-related object model comprising objects exposing speech-related members for use by speech-related applications in performing speech processing tasks.
- 10 2. The computer readable medium of claim 1 wherein the managed code layer is configured to include a non-speech related object model comprising objects exposing non-speech related members for use by  
15 applications to perform non-speech related processing tasks.
3. The computer readable medium of claim 2 wherein the speech-related object model and non-speech  
20 related object model are accessed using accessing techniques that are the same for both object models.
4. The computer readable medium of claim 3 wherein the non-speech related members exposed by a non-  
25 speech related object in the non-speech related object model include methods, properties acted on by the methods, and events triggered by a state of the non-speech related object.

5. The computer readable medium of claim 4 wherein the speech-related members exposed by a speech-related object in the speech-related object model include methods, properties acted on by the methods,  
5 and events triggered by a state of the speech-related object.

6. The computer readable medium of claim 5 wherein the speech-related members and non-speech related  
10 members all designed to be specified and invoked in a consistent way.

7. The computer readable medium of claim 1 wherein the speech-related object model includes:  
15 a recognizer object configured to represent a speech recognizer.

8. The computer readable medium of claim 7 wherein the speech-related object model includes:  
20 a grammar object model configured to represent a grammar used by the recognizer object in recognizing speech.

9. The computer readable medium of claim 8 wherein  
25 the speech-related object model includes a result object configured to represent a recognition result.

10. The computer readable medium of claim 9 wherein the speech-related object model includes an event

handler object configured to handle events generated by the recognizer object.

11. The computer readable medium of claim 7 wherein  
5 the recognizer object comprises a local recognizer object controlled by a process that instantiated the local recognizer object.

12. The computer readable medium of claim 11 wherein  
10 the recognizer object comprises a system recognizer object shared by multiple processes.

13. The computer readable medium of claim 8 wherein  
the grammar object comprises a XML-based grammar  
15 object having exposed members accessible to create a grammar using XML expressions.

14. The computer readable medium of claim 8 wherein  
the grammar object comprises a dictation grammar  
20 object representing a dictation grammar.

15. The computer readable medium of claim 8 wherein  
the grammar object comprises a dynamic grammar object  
having exposed members accessible to create a dynamic  
25 grammar that is dynamically generated at runtime.

16. The computer readable medium of claim 8 wherein  
the grammar represented by the grammar object has  
semantic properties associated with rules therein.

17. The computer readable medium of claim 16 wherein the semantic properties are emitted based on one of a plurality of different mechanisms.

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18. The computer readable medium of claim 17 wherein the speech-related object model exposes members to provide the semantic properties in a consistent form regardless of the mechanism used to emit the semantic  
10 properties.

19. The computer readable medium of claim 1 wherein the speech-related object model comprises a voice object configured to represent a speech synthesizer.

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20. The computer readable medium of claim 19 wherein the voice object exposes members accessible to call a synchronous speak operation and a non-synchronous speak operation.

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21. The computer readable medium of claim 19 wherein the speech-related object model includes exposed members accessible to specify a synthesizer based on voice characteristics.

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22. The computer readable medium of claim 19 wherein the speech-related object model includes a voice attributes object representing attributes of a synthesized voice.

23. The computer readable medium of claim 19 wherein  
the speech-related object model includes a synthesis  
event handler configured to handle events generated  
5 by the voice object.

24. The computer readable medium of claim 1 wherein  
the speech-related object model includes a first  
grammar object representing a first grammar and a  
10 second grammar object representing a second grammar  
and wherein the first grammar has a rule that refers  
to a rule in the second grammar.

25. The computer readable medium of claim 24 wherein  
15 the speech related object model includes a grammar  
maintenance component that updates the first grammar  
when the referred to rule in the second grammar  
changes.

20 26. An object model, comprising:  
a set of speech-related objects exposing  
members, accessible by applications  
that target managed code to perform  
speech-related tasks.

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27. The object model of claim 26 wherein the exposed  
members are accessible to perform speech recognition  
tasks.

28. The object model of claim 26 wherein the exposed members are accessible to perform speech synthesis tasks.

5 29. The object model of claim 26 wherein the exposed members are accessible using techniques that are the same as techniques used to access members exposed by non-speech related objects in a platform that contains the speech-related objects.

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30. The object model of claim 26 wherein the speech-related objects include a dynamic grammar object that exposes members accessible to implement a dynamic grammar.

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